EXAMINATION OF THE TIMELY TRANSITIONS GAME FOR USE IN FIRST AND SECOND GRADES

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Abstract: As academic time and resources are ever shrinking it is important for researchers and practitioners alike to identify solutions that do not require many additional resources to yield big results. The Timely Transitions Game (TTG) offers a solution for teachers who find their classes spending precious learning time on inefficient transitions by integrating explicit timing procedures, an interdependent group-oriented contingency for reinforcement, and randomized success criteria.

The purpose of the current study is to validate the success of the timely transitions game in reducing the amount of time that it takes for classes of students to transition from recess to the school building while expanding the literature on group wide methods of decreasing transition time.

This study used a concurrent multiple baseline design to validate the effectiveness of the TTG on transitions of first and second graders from recess to the school building. Baseline data for three class' playground to building transitions were collected and recorded. Each class began playing the game as their individual baseline data stabilized or indicated an upward trend according to visual analysis. Initiation of game play was staggered by at least two days. If the class' transition time was less than their randomly chosen criteria they earned a letter toward their chosen reinforcement. For example, if working for cake they needed to earn C-A-K-E. Each class was given their reinforcement the day after they earned it. Results for two classes showed an immediate and stable decrease in the amount of time spent transitioning from the playground after recess to the school building. One class had data that were inconclusive but demonstrated an initial change in level during intervention phase. Their data returned to near baseline levels after they earned reinforcement. This study shows the promise for the positive effects of the TTG at decreasing the amount of time spent on transitions.

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CHAPTER I

INTRODUCTION

Parents send their children to school and expect them to be learning throughout the day. Unfortunately, a majority of students only spend 28%-56% of their time in school actively engaged in learning activities. This time is referred to as "academic engaged time" or "academic learning time" (Gettinger & Walter, 2012; Jez & Wassmer, 2015; Popkin & Skinner, 2003; Wilson & Wesson, 1986; Yarbrough, Skinner, Lee, & Lemmons, 2004). While time can be defined by the length of a school year, school day, or even period of instruction, academic learning time is characterized by time that is spent by students productively completing tasks related to academic subject areas. The length of time for these activities is often impacted by lunch periods, bathroom breaks, recess, and special events that take place throughout the school year such as pep assemblies or awards ceremonies (Caldwell, Huitt, & Graeber, 1982). For some schools this means students only spend 2.24 to 4.48 hours each day participating in activities directed at increasing their academic knowledge. Many studies have reported a positive correlation between higher rates of academic learning time and increased academic achievement (Caldwell, et al., 1982; Gettinger & Walter, 2012; Huitt, Caldwell, Traver, & Graeber, 1981; Jez & Wassmer, 2011). Jez and Wassmer (2015) found an increase of fifteen instructional minutes to the school day presented a statistically significant one percent increase in overall academic achievement among disadvantaged elementary students with whom they worked in California. As a result of the positive correlation between academic learning time and scholastic

success in addition to the current educational climate made up of budget cuts to already ailing school districts, it is imperative for researchers and practitioners to find ways to increase the academic learning time of students. One possible, yet highly unlikely way to increase academic learning time would be to add days to the academic calendar. Because this is a costly and almost impossible solution for many public school districts, there must be a way to enhance the time already allotted for learning throughout the preset school year (Campbell & Skinner, 2004).

Transition Time

In an effort to identify the problem, researchers have named socializing, daydreaming, disciplining, time spent out of the classroom, and transitioning as five of the most common activities that detract from academic learning time (Huitt et al., 1981).Transition times may present their own set of possible negative behaviors and make up around a quarter of the time children spend at school (Codding & Smyth, 2008). They involve the culmination of one activity and the commencement of the next, often expected to take place smoothly and quickly. Students with Attention Deficit/Hyperactivity Disorder or Autism may find transitions to be exceptionally difficult (McIntosh, Herman, Sanford, McGraw, & Florence, 2004). Students may refuse to move on to the next activity if they do not finish or if they find the next activity unappealing or difficult to complete. They may also try to distract their classmates from hearing the instructions for the next activity and in turn, create confusion that will prolong the amount of time it takes to move between activities.

Additionally, when students are off task during transition times, teachers often find themselves resorting to time consuming means of gaining order in the classroom. They begin repeating instructions, delivering verbal reprimands, or ignoring students who are off task and moving on with the lesson leaving these students behind (Fudge et al., 2008). Teachers may inadvertently expect their students to know the rules for periods of transition without having explicitly taught and practiced them. This only increases the confusion and chaos present during many transition times

throughout the day leading to increased wasted time with redirections and punishments. A major way to prevent confusion over classroom expectations during transition times is to teach the students the expectations and provide chances for them to practice the proper behavior while providing corrective feedback if necessary and behavior specific praise. Providing pre-corrections or behavioral prompts prior to embarking on transitions may even provide opportunities for errorless learning and prevent the possibility of children being reinforced by each other for behaving poorly (McIntosh, Herman, Sanford, McGraw, & Florence, 2004).

There are a number of other ways for teachers to make transition times smoother for individual students, however, considering that most transitions are a whole-group activity, it is likely more beneficial to view this issue through a classroom management lens. For instance, providing a cue that a transition will begin soon in the form of a song or tone can signal all students to begin wrapping up their activities and be ready to move on without abruptly moving from one task to the next. This may minimize negative behaviors such as noncompliance and tantruming, especially among young children. Teachers should have a clear and concise plan for when and how transitions should take place throughout the day. Not only does this serve as a method for them to have control in the classroom and foresee potential problems, it allows them to optimize the time they have to devote to learning because they can plan their academic activities in a way that can be minimally impacted by the disruptions of transitioning. For example, teachers can plan natural breaks between subjects rather than interrupting lessons with bathroom breaks. Teachers are also able to review their schedule to identify and eliminate unnecessary transitions (Hemmeter, Ostrosky, Artman, & Kinder, 2008). The Timely Transitions Game devised by Campbell and Skinner in 2004 is another successful evidence-based intervention for minimizing the time used by students to transition from room to room and could possibly be used to account for within classroom transitions as well. It employs explicit timing, paired with direct instruction of expectations, public performance feedback, and group-wide reinforcement to help students make efficient transitions.

Explicit Timing

Explicit timing involves the delivery of instructions and overt timing of the person or group completing the task. Teachers are often already over extended with ever increasing academic standards, heterogeneous levels of student achievement within their classrooms, and minimal time and resources to bridge the gaps in curriculum. They need solutions that are simple and effective. Another possible solution to the problem of inadequate learning time is to increase the number of times students are able to respond in a given period. Increasing automaticity of a behavior, or how quickly it can be performed, has been shown to make more time available for other activities. Due to this finding, Campbell and Skinner (2004) proposed using explicit timing to decrease the amount of time students spend on transitions in their creation of the TTG. Explicit timing has been shown throughout research to be effective at increasing fluency in academic behaviors such as reading and mathematics. It is likely that it would have a similar effect on transition behavior as well (Derr & Shapiro, 1989; Derr-Minneci & Shapiro, 1992; Evans-Hampton, Skinner, Henington, Sims, & McDaniel, 2002; Rhymer, Skinner, Henington, D'Reaux, & Sims, 1998; Rhymer et al., 2002).

Children are familiar with completing tasks under time constraints. The school day is made up of several intervals of time during which students are expected to learn the lesson and complete assignments. Van Houten and Thompson (1976) found that when students with poor math fact fluency were given timed practice, they nearly doubled the number of problems they were able to correctly complete in one minute. They indicated using short intervals of timing helps to make the behavioral changes more noticeable. Rhymer et al. (1998) took that a step further to illustrate the importance of behavioral accuracy prior to explicit timing. Their study found that while the explicit timing procedure encouraged students to complete more problems, students who were still learning the target skill did so with decreased levels of accuracy. Fluent and accurate responding to math facts is a behavior not unlike transitioning. While the topography may be different, both behaviors need to be taught.

Codding and Smyth (2008) applied a different approach to explicit timing to examine the effects teachers have on the transition times of their students. They timed the transitions of classes and provided the teachers with feedback about the time of the transitions and their adherence to a time management checklist where the teachers were given explicit instruction of how to complete a successful transition. The target transitions occurred during each teacher's biology class. They found that timing and performance feedback resulted in an almost 30% decrease in transition time and a significant increase in student engagement. Not only were they able to provide more instructional time without manipulating the class schedule, but these researchers were able to support the long held hypothesis that increased learning time promotes increased student engagement. They did not measure if the student engagement increases played a role in increasing academic outcomes, however, future research may address that question.

Group-wide Contingencies

It is logical to make changes in transition times when working with a whole group of students as transitions are often made with the entire class present. Additionally, when providing reinforcement for behavior, it is often more economical to provide reinforcement to a group rather to each student individually. It is less time consuming to provide a blanket statement of praise to a whole class or to provide one large item of reinforcement instead of multiple small items (Litow & Pumroy, 1975). Campbell and Skinner's (2004) TTG is a game that is played by everyone in a class and uses a group-wide contingency to deliver reinforcement adding to the ease of its implementation. There are three main ways to include a group-oriented contingency. These are dependent group-oriented contingencies, independent group-oriented contingencies, and interdependent group-oriented contingencies (Litow & Pumroy, 1975). Each type of group-oriented contingency has its advantages and disadvantages.

Dependent group-oriented contingencies hold all students to the same behavioral standards but the consequential actions are dependent on the behavior of a few students. For example, in a classroom, all students are expected to follow the rules but if there are a few students who consistently break the rules, a teacher may put a dependent group-oriented contingency in place. This encourages the few rule breakers to act appropriately so the whole class may earn a prize. Conversely, if these students fail to meet the criteria, the whole class may face a punishment. The ideation behind this type of contingency is meant to increase encouragement from peers. For students whose rule breaking behavior is maintained by peer attention, it provides a way for them earn positive attention from their peers for correct behavior. Unfortunately, this type of contingency has the possibility of breading animosity toward the target students if they fail to earn the whole class a prize (Litow & Pumroy, 1975).

Independent group-oriented contingencies still hold all students to the same standard of behavior but reinforcement is given based on each students' individual behavior. For example, if the teacher is offering a pizza party for students who master their times tables by the end of the year, each student who mastered this skill will be included in the reinforcement group while those who failed to meet criteria will be excluded. Independent group-oriented contingencies open room for criticism due to their exclusionary nature with some students, no matter how hard they try, being left out of the reinforcement (Litow & Pumroy, 1975; Skinner, Cashwell, & Dunn, 1996).

The TTG uses an interdependent group-oriented contingency. Each student's behavior has an equal effect on the probability of earning reinforcement. In the context of the TTG this means that each students' adherence to transition policy and how quickly they are able to complete the transition affects the whole class' access to reinforcement. Interdependent contingencies are easier to implement due to their all or none delivery of rewards. Students are more likely to work together to increase their chances of receiving reinforcement. Unfortunately, the criteria is a culmination of all student behavior and there will sometimes be students who find it difficult to meet the standards and do their part in the

group. This may cause other students to either positively encourage them with cheers or negatively encourage them with threats (Litow & Pumroy, 1975; Skinner, Cashwell, & Dunn, 1996).

Timely Transitions Game

The Timely Transitions Game (TTG) is group wide intervention comprised of all the aforementioned evidence-based factors. Campbell and Skinner (2004) were asked to provide a class-wide intervention for sixth grade students in the school in which Campbell was providing services as a behavior specialist during her final year as a Ph.D. student in a school psychology program. Baseline data were collected for the room-to-room transitions of the class. Campbell then reviewed appropriate line behaviors with the class and modeled them. She gave the class opportunities to practice these behaviors and provided feedback when necessary. The explicit timing procedure was explained and the students were told the cue to line up would be the signal that timing had begun and the stopwatch would continue until each student exhibited the correct line behavior. Once the students were in the hall, if any infractions occurred the timer would begin again until the class regained their composure. Campbell then explained that each transition time would be recorded daily and their teacher would choose a random transition period from a container on her desk that contained a pool of all room-to-room transition periods throughout the day. She then explained the teacher would choose a random time criterion from another container holding a pool of times. If the actual time of the randomly chosen transition period was lower than the time the teacher had drawn the class earned a letter to spell out a prize. The class began playing the game the day following the game training. Campbell and Skinner found a decrease in average transition time of 1.5 hours per week (Campbell & Skinner, 2004). Unfortunately, the researchers were unable to carry out their proposed withdrawal design at the insistence of the teacher. She enjoyed the benefits of the treatment phase and would not allow the researchers to withdraw the TTG from her students.

A replication of this study was done in 2004 by Yarbrough et al. They worked with a class of second graders on transitions from lunch to the classroom. The teacher reported the students engaging in a multitude of time wasting negative behaviors such as yelling, jumping, and hitting. Using the same procedure as before but utilizing a six-phase withdrawal design, the researchers were able to observe a 50% decrease in the amount of time spent on the transition from lunch to classroom instruction (Yarbrough et al., 2004).

Study Purpose

For years researchers have demonstrated the utility of explicit timing in increasing rates of responding (Derr & Shapiro, 1989; Derr-Minneci & Shapiro, 1992; Evans-Hampton, Skinner, Henington, Sims, & McDaniel, 2002; Rhymer et al., 1998; Rhymer et al., 2002). Studies have shown the benefit of group-wide contingencies and reinforcement (Barrish, Saunders, & Wolf, 1969; Elliott, Turco, & Gresham, 1987; Grandy, Madsen, & De Mersseman, 1973; Gresham & Gresham, 1982; Jenson, 1978; Litow & Pumroy, 1975; McLaughlin, 1974; C. Skinner, Skinner, & Sterling-Turner, 2002; Stage & Quiroz, 1997). Two studies, only one of which was able to demonstrate experimental control, have been published using the TTG (Campbell & Skinner, 2004; Yarbrough et al., 2004). The purpose of the current study is to validate the success of the timely transitions game in reducing the amount of time that it takes for classes of students to transition from recess to the school building while expanding the literature on group wide methods of decreasing transition time.

Research Question:

1. Does the Timely Transition Game reduce the amount of time spent on transitions in elementary schoolers?

CHAPTER II

REVIEW OF LITERATURE

The majority of students only spend 28%-56% of their time in school actively engaged in learning activities. (Gettinger & Walter, 2012; Jez & Wassmer, 2015; Popkin & Skinner, 2003; Wilson & Wesson, 1986; Yarbrough, Skinner, Lee, & Lemmons, 2004). This poses educational researchers and practitioners with a unique opportunity to help teachers maximize the amount of time they have to teach students. The Timely Transitions Game (TTG) was created by Stephanie Campbell and Cristopher Skinner (2004) in response to teacher concerns with elongated transition times detracting from already limited learning time. The intervention is comprised of elements that have been demonstrated to bring about positive behavior changes. These are explicit timing procedures and interdependent group-oriented reinforcement contingencies with randomly selected success criteria.

Transition Time

Transitions are periods of time during which students are moving from one activity to the next. Transitions take place within the classroom during the changing of subjects, and also within the school building from the classroom to any other area of the building (Arlin, 1979; Guardino & Fullerton, 2014; Lee, 2006). Because of the link between academic success and time spent actively engaged in academic tasks, researchers are attempting to identify ways to increase the amount of time available for learning. Adding time to the end of a school day or adding days to the school year are not viable options but making transitions more efficient appears to be a

common answer to the all too common problem of not having enough time for students to learn (Jez & Wassmer, 2011).

Many variables can affect the fluidity of transitions. Transitions taking place between rooms have a higher probability to be inefficient and waste learning time. During these transitions, student behaviors are harder to monitor. Students walking in lines do not have as much space to move around resulting in more peer to peer physical contact. There are also not as many behaviors for students to be reinforced other than desired hallway behavior (Campbell & Skinner, 2004; Myerson & Hale, 1984; Skinner, Wallace, & Neddenriep, 2002). Teachers often find themselves fighting an uphill battle to get their whole class of students from one area of the school to another in a timely manner. In an attempt to combat these negative student behaviors, teachers use various strategies to help reduce the amount of time their class spends in the hallway. One of the more commonly used and ineffective strategies is waiting for the students to calm down and follow the expected procedures. This does little more than reinforce the negative behaviors with attention and wastes more time that could be spent learning (Paine, 1983).

Transitions within the confines of the classroom are often no more effective. The physical environment of the classroom in combination with providing clear instructions concerning the next task have a major impact on the amount of time it takes for students in a classroom to switch from one subject or activity to the next. Hemmeter et al. (2008) found that teachers reported observing more academically centered behaviors when their classroom was run in a way that supported quick and effective transitional periods (Guardino & Fullerton, 2014).

Whatever the cause of the elongated transition periods, one thing remains fairly consistent in the research; students spend roughly a quarter of their school day transitioning from one activity to the next (Codding & Smyth, 2008). Ardoin, Martens, and Wolfe (1999) found a correlation between decreased transition time and increased academic learning time which has

been shown to have a positive relationship with student achievement and academic success. Furthermore, when transitions are more structured and run effectively, they have been linked to a reduction in student misbehaving (Caldwell et al., 1982; Campbell & Skinner, 2004; Lee, 2006; Paine, 1983; Thelen & Klifman, 2011). With so much time spent going from one activity to the next, a logical starting point may be addressing some variables that often extend transition times.

There are numerous methods for reducing the amount of time in a day consumed by transitions. Sprick, Garrison, and Howard (1998) suggest that transitions are most successful when the teacher puts forth planning and effort. The preparation that goes into this includes teaching the expected behaviors for transition times, offering opportunities for the students to practice, providing corrective feedback when the behaviors are not performed or are performed incorrectly, and giving reinforcement when the behaviors are performed accurately (Colvin, Kameenui, & Sugai, 1993; Colvin & Lazar, 1997; McIntosh, Herman, Sanford, McGraw, & Kira, 2004). Other behavioral techniques for reducing transition time range from playing a song to indicate that a transition is or will be taking place, to piecing together components of effective intervention practices into a formal intervention. While other research has focused on the former, this study will focus on the latter, more specifically Campbell and Skinner's Timely Transitions Game (2004).

Explicit Timing

Explicit timing is an evidenced-based method used to increase fluency or rate of responding to stimuli. In relation to the TTG, explicit timing serves as an integral component for decreasing the amount of time students spend transitioning from one task or area to the next. Explicit timing involves the overt timing of a learner's performance on a specified task and is used to increase fluency. It has been used to improve the performance of people in the areas of reading, writing, math, and behavior. It is generally the next step in learning a new skill after the initial acquisition of the skill. The main purpose of explicit timing as a feature of interventions is

to increase the fluency of accurate responding (Haring & Eaton, 1978). Researchers have been able to show the success in increasing students' rates of responding to stimuli when they know they are being timed (Derr & Shapiro, 1989; Derr-Minneci & Shapiro, 1992; Evans-Hampton, Skinner, Henington, Sims, & McDaniel, 2002; Rhymer et al., 1998; Rhymer et al., 2002).

Van Houten and Thompson (1976) likened explicit timing procedures to operating on a fixed-interval schedule of reinforcement where a student knows that after a certain amount of time, there is an opportunity for reward. Children are familiar with the school day being broken down into several intervals of time with specific instructions applied to them. They know that during math if they listen to the lesson and complete their assignments quickly they may not have to take class work home to be completed after school. Most school children are familiar with competition where reinforcement is earned by being faster than others or beating your own score. Explicit timing allows students to practice skills in a systematic way that improves their speed and potentially reach reinforcement faster.

Rhymer et al. (1998), however, found that it did not necessarily increase the rates of accurate responding when the correct procedures were not taught or reinforced. This is an important finding as simply because students respond quickly to stimuli, if they do have an appropriate level of accuracy in the skill or behavior performance, it does little good to respond quickly. This relates to the instructional hierarchy and can be thought of in the context of the TTG. The instructional hierarchy emphasizes using data to make instructional decisions. It provides a guide whereby a teacher can advance a student's progress in a certain skill from developing accurate response patterns to generalizing that particular skill to stimuli similar to the learning environment. Learning begins with the acquisition phase where learners are introduced to a concept. For example, students are taught the hallway behavior expectations on the first day of school. The teacher may demonstrate the appropriate way to walk down the hallway then do so in an inappropriate manner and ask the students to provide her with behavioral correction. When

the students are able to respond accurately, they are given repeated practice and feedback through explicit timing by the teacher until the responses are fluent. From there, students may practice generalizing this skill in similar situations that may have minor alterations from when they first learned the skill. For example the students could generalize walking in line with their class to how they are supposed to walk down the hallway when they are alone or in a small group (Ardoin & Daly, 2007).

For explicit timing to be constructive, there must be immediate feedback given to ensure accurate responses occur. Timing students also helps their growth in a skill more readily observable due to the short bursts of response time and increased rates of responding (Van Houten & Thompson, 1976). In terms of transitions, this is beneficial information because it indicates that if students do not know the appropriate behaviors or are not reinforced for performing them, they will not make very much growth in terms of faster transitions. It illustrates the importance of providing explicit instructions concerning the proper transition behaviors and procedures.

Group Contingencies and Randomized Criteria

It has been discussed previously that teachers need simple ways to go about making behavioral changes in their classrooms. The TTG has taken that directive and utilizes group-wide contingencies and reinforcement. Group contingencies have repeatedly been found to be effective in bringing about positive changes in class wide behaviors (Barrish, Saunders, & Wolf, 1969; Elliott, Turco, & Gresham, 1987; Grandy, Madsen, & De Mersseman, 1973; Gresham & Gresham, 1982; Jenson, 1978; Litow & Pumroy, 1975; McLaughlin, 1974; Skinner, Skinner, & Sterling-Turner, 2002; Stage & Quiroz, 1997). Group contingencies help to increase teamwork and cooperation by requiring them to work together in order to reach their goal and earn reinforcement. Group contingencies have been observed in certain studies to reduce the number of times students in a class engage in socially unacceptable behaviors such as holding up their

middle finger at others or talking out of turn (Axelrod, 1973). There are three categories that define group contingencies. These are independent, dependent, and interdependent.

Independent contingencies base the attainment of reinforcement on individual student performance (Litow & Pumroy, 1975; Theodore, Bray, Kehle, & Jenson, 2001). In this type of contingency, each student is held to the same standard and will receive the same reinforcer if he or she meets the criteria. A major drawback to this type of contingency is that the available reinforcer may not be desirable to every student. This is especially problematic for students who do not often succeed without external reinforcers. They may not perform to the set standard to meet the goal because they do not feel motivated by the available prize. An example of this type of contingency would be allowing free time for the whole class based on each student's ability to complete a designated task.

Dependent reinforcement contingencies involve the receipt of reinforcement based on the performance of a few students. For example, if there are two or three students who consistently break the rules during lunch time, the teacher may put a dependent reinforcement contingency in place. She may tell the class that if this group of students can follow the cafeteria procedures for three lunch sessions in a row, the whole class may have extra recess. One glaring disadvantage of this method is that it has the potential to breed animosity between students or put undue pressure on students who often fail to meet the required standards for reinforcement (Litow & Pumroy, 1975). In contrast to this concern however, researchers have found that children with consistent behavior problems respond more positively to peer attention than attention and rewards given by adults (Minuchin, Chamberlain, & Graubard, 1967). Ideally in a dependent reinforcement contingency, students are able to recognize the power they hold toward earning reinforcement. When students know this, they will encourage the students upon whose behavior the reward is contingent. Although dependent reinforcement contingencies have the ability to create animosity among students and inadvertently condone bullying, there is a possibility to bring students

together to rally behind lower functioning students. Another weakness of group contingencies overall is that some students may be hindered or upset by the thought of letting down their classmates because of poor performance on their individual part (Kelshaw-Levering, Sterling-Turner, Henry, & Skinner, 2000).

The most widely used and efficacious type of group contingency is the interdependent group contingency. In this type of contingency, reinforcement is given based on the performance of the group as a whole often reflected in an average (Litow & Pumroy, 1975). Interdependent group contingencies encourage students to work together and encourage each other to do their best. Implementers may notice a reduction in the isolation experienced when only a few children consistently earn reinforcement while the rest of the class struggles to meet the criteria. Students who often have trouble meeting the goals on their own may be encouraged to keep trying because they are still allowed reinforcement by the other students who bring up the average (Davis & Blankenship, 1996; Skinner, Cashwell, & Dunn, 1996). Another benefit for teachers or other professionals implementing interdependent contingencies is that reinforcement is delivered on an all-or-none basis relieving the responsibility of keeping track of individual students who have earned the prize (Kelshaw-Levering et al., 2000).

Interdependent contingencies are not without flaw. Students may use inappropriate means to "encourage" other students to bring up their performance and help the group meet their goal. Some students may purposely lower their performance to impede the success of the other students toward reaching their goal. An additional downside is that if the students as a group begin to feel that they are unable to reach the criteria set forth to achieve reinforcement, they may get discouraged and stop working (Lew, Mesch, Johnson, & Johnson, 1986; Romeo, 1998; Skinner et al., 1996).

Randomizing reinforcement criteria has been shown to combat some of the previously mentioned downsides to group contingencies. When students are not aware of exactly what

criteria their reinforcement will be based on, they are more likely to work hard continually to earn the prize (Kelshaw-Levering et al., 2000; Skinner et al., 1996). For instance, if students are not sure if their accuracy, fluency, or on task behavior will be the defining criterion for earning reinforcement, they may try to increase all of these behaviors to ensure a better chance.

Timely Transitions Game

The Timely Transitions Game (TTG) was developed by Stephanie Campbell and Christopher Skinner (2004) to decrease the time of room-to-room transitions. The class' room-to-room transitions was timed using a timer, of which all students were aware. At the end of the day, the teacher chose a random transition period and a random number of seconds from a box of premade criterion and numbered transition times. If during the selected transition period the class' transition time was shorter than the one drawn from the box, the class earned a letter toward a word that described the reinforcement to be earned. For example, the class could earn the letters M-O-V-I-E and be able to watch a movie in class after they spelled the whole word (Campbell & Skinner, 2004).

The original sample was made up of 26 sixth-grade students from a predominantly African American class. After establishing a baseline of the number of seconds it took for the class to move from one area of the school building to another, the students were taught hallway transition procedures through explanation, modeling, response, and feedback. The students were then exposed to the timing component of the intervention. They were timed lining up inside the classroom and while making the transition from their classroom to the next room. After the students consistently demonstrated appropriate hallway behaviors, they were taught the rules of the TTG. The students learned that they would be timed from the time they were given the prompt, "it is time to line up now" (p. 17), to when they showed proper lining up behavior. If after the class went into the hallway they broke procedure the teacher stopped the line and started the timer again, adding to the time it took to line up. When the class exhibited the appropriate

behavior again, the timer was once again stopped and the class continued through the hall. The students were told how long their transition took and the time was displayed on a board where all the students could see. After being trained on the timing procedure, the students were taught about the group contingency and the randomized criteria.

The students began playing the TTG the morning following the training session. Treatment integrity was measured by a behavior specialist. She checked to see if each of the transition times had been written on the display board and if the randomly drawn transition and criteria had been recorded as well. The result of the intervention showed marked reductions in transition times for the class. They began with transitions making up 2 hours of the school week. During the intervention phase, the class averaged 29 minutes per week spent on transitioning from their classroom to another. The cooperating teacher in this study opted to not have her class participate in the withdrawal phase of the study leaving the researchers with an empirical case study, thus, not allowing them to demonstrate experimental control over the variables.

Campbell and Skinner's original TTG study prompted a follow up study with a group of 15 second grade students all of whom were African American by Yarbrough et al. (2004). The teacher requested help during their transition from lunch to the classroom. She reported students yelling, hitting, and running around and other disruptive behaviors upon their entrance to the classroom. The follow-up study utilized the same procedures as Campbell and Skinner. The researchers were able to carry out the entirety of a withdrawal design to show experimental control over the time spent on transitions by the students. Results of this study show marked decreases in transition time during treatment phases. Transitions during the first baseline phase had an average of 178 seconds. The class' transition times during the first treatment phase were an average of 59 seconds. When the treatment was withdrawn the first time and the students were told they were no longer being timed, their initial data point stayed at treatment level but rose back to baseline levels. The second treatment phase showed an immediate drop in level

comparable to the first treatment phase with times ranging from 33 to 55 seconds. This pattern continued for the final withdrawal and treatment phases respectively (Yarbrough et al., 2004).

The researchers were also able to implement a fading procedure. Fading is defined as a procedure during which a stimulus controlling a behavior, in this case the reinforcement, is gradually changed to a new stimulus while maintaining the behavior (Cooper, Heron, & Heward, 2007). During this time, they made the words that described the rewards longer. The teacher also discarded any transition times in box of criteria that were over one minute long and replaced them with shortened times. The original box contained times ranging from 40 to 100 seconds in 5-second intervals. Yarbrough et al. were able to address a number of the limitations not addressed by their predecessors. The main limitation being that there was no control for history effects on the behavior of the students. Due to the teacher's unwillingness to withdraw the treatment, it could not be determined that the students transitioned more quickly because they were being timed and working to earn a prize. This was addressed through the use of the A-B-A-B withdrawal experimental design consisting of six phases. The results of this study showed that the TTG was able to decrease the class' average transition time from over two minutes to around one minute (Yarbrough et al., 2004).

In their article, Yarbrough et al. (2004) discussed ways in which future research could further validate the effectiveness of the TTG. One of these ways was to repeat the study across different settings involving different grades and students. Another suggestion addressed the issue of sabotage that was observed during one of their intervention phases. They reported a day where a student in the class got into trouble during lunch and decided to not sit down upon entering the classroom as was the expected behavior. Despite the other students begging or telling the disgruntled student to sit down, the student stood for two minutes and prohibited the others from meeting the criteria. To prevent this type of behavior from happening in future studies, it was recommended to have students compile a list of reinforcement options that could be chosen at

random. This would help to ensure that each student has a prize possibility for which he or she is willing to work (Yarbrough et al., 2004).

The current study addressed some of the concerns risen by Yarbrough et al. It examined the effectiveness of the TTG during transitions from recess to the school building with first and second grade students in a rural school district. The previous studies used second grade students in an urban public school and sixth grade students in a rural public school, both in Tennessee. Furthermore, this study aims to make the results more generalizable by including different ethnicities of students. The ethnic makeup of this study's population is roughly half Native American and half Caucasian. This is different than the classes made up of nearly all African American students used before. Additionally, to protect against possible sabotage observed in Yarbrough et al.'s study, the researcher used a reward that all students said they wanted to earn.

CHAPTER III

METHODOLOGY

Participants and Setting

Two second grade general education classrooms and one first grade general education classroom at a public elementary school in rural northeastern Oklahoma were included in this study. Of the 54 students in the target population, 13.3% had been retained or were on an Individualized Education Plan (IEP). The school has 205 students and approximately half of the student population are Native American. The free and reduced lunch eligibility rate was 94% which indicates a large portion of students live at or below the poverty line in this district. All teachers had several years of experience. The teacher of Class 1 was a first grade teacher and has been teaching for 30 years. Class 2's teacher was a second grade teacher and has been teaching for 23 years. Class 3's teacher was a second grade teacher and had been teaching for 16 years.

Materials

Each class was furnished a digital stopwatch; a container small enough to sit on a teacher's desk, to hold slips of paper containing the random transition time goals; and reinforcers chosen by the class with the teachers' permission. A piece of foam core poster board was used to document the feedback about each day's transition. This board displayed a column for the date, one column for each transition to record the number of minutes and seconds it took to make that transition, a column to write the criteria (time in minutes) of the day that was drawn, and a column to indicate

whether or not the class met the criteria needed to earn their reward. There was also a column to record the letter that the class earned toward their prize. For example, the classes chose to earn cake as their prize so they had to earn C-A-K-E.

Procedures

Design. A small N concurrent multiple baseline design was chosen for the study. A concurrent multiple baseline design demonstrates experimental control with the staggered introduction of the independent variable at different points in time. This type of design allows for treatment effects to not only be seen within each data set (each class' data), but also across data sets from class to class. When the intervention phase began for the first class, baseline data continued to be collected for the others. The start of each successive class' treatment phase was staggered at least two days. Treatment phases began with the baseline data had at least three points and were stable or trending upward. This design allows for experimental control across multiple classes while also controlling for many threats to validity such as history, selection, and temporal precedence (Winn, Skinner, Allin, & Hawkins, 2004). Each class that exhibited the treatment effect of regularly shortened transition times added to the power of experimental control.

Data collection procedures. Data for all three classes' transition times were collected by the primary researcher and research assistants. Direct observation procedures were used to record the amount of time it took the students to line up quietly and orderly after the teacher blew the whistle to signal the end of recess. The research assistants were graduate students from a school psychology Ph.D. program. They had been trained to begin the timers when the whistle blew for the students to line up and to stop the timer when their assigned class was completely in line, quiet, facing forward, and standing still for three seconds. The teachers on duty gave the researcher and assistants a head nod to signal that a class was completely in line.

Each day the research team came to the playground 10 minutes early and stood near the students' designated area to line up. During baseline phase, the researchers covertly began timing the students directly after the whistle blew. They hid their timers by crossing their arms. After students in their assigned class made it to the line and were standing quietly and facing forward for 3 seconds, the researchers stopped timing.

Baseline. Prior to implementing the TTG, three or more baseline data points were collected until the data showed consistency or an upward trend as noted by visual analysis. The first class whose data leveled out or began to increase was chosen for intervention first. Each data point was graphed by the researcher daily using Microsoft Excel software. The baseline data points were closely monitored by looking at the graphs and every two days, pending an upward or stable trend, a new class began the treatment phase until all classes had begun the treatment phase.

Teaching and intervention. The school system was implementing Schoolwide Positive Behavioral Interventions and Supports so the procedures to be used following recess had been previously delineated by school staff (Sugai & Horner, 2002). The students were expected to line up quickly, stand facing forward with their mouths closed. They were to hold playground toys without playing with them and keep their hands to themselves. The researcher had the students practice the appropriate way to line up following a whistle blow like the one that signals the end of recess until they could do so without requiring correction. She emphasized to each class that this would be a team effort so everyone should mind his or her own behavior and make sure they were doing their part to help the class succeed. The researcher then explained the explicit timing component of the intervention and how she would begin timing when the whistle blew at the end of recess for them to line up. After they were in line and exhibiting the appropriate behavior for three seconds the timer would be stopped and the class would be led inside. She also explained that transition times for the day were to be recorded on the designated foam core poster board.

The researcher and teacher then demonstrated the process of drawing the transition time criteria and recording if the class met the randomly drawn criteria on the poster board. Finally, the researcher explained to the students that each time they met the random criteria, they would earn a letter toward their prize.

Selection of reinforcers was based on a list of items approved by the teacher that would not require extensive instructional time to be lost. Each class chose to earn cake at the end of their game play. The class earned a letter each time they met the randomly chosen criteria. The letters earned spelled out the reinforcement they chose (i.e. C-A-K-E).

After the training was completed, the students began playing the game and the researcher tracked their data. The study continued until all classes had been through the intervention phase, earned their chosen reinforcement, and the data indicated that the game definitively had or had not had an effect on their transition time.

Treatment integrity. Treatment integrity was tracked by monitoring the recording boards to make sure the data was being collected and presented to the students. Interrater Reliability of each class' transition times were calculated on 30% of the intervals. Two research assistants timed the same class's transitions to ensure a minimum of 90% reliability.

CHAPTER IV

RESULTS

Research Question: Does the Timely Transition Game reduce the amount of time spent on transitions in elementary schoolers?

	Baseline Mean (last 3 points)	Treatment Phase Mean (last 3 points)
Class 1	143.67 sec	81sec
Class 2	152.67 sec	73.67 sec
Class 3	124 sec	60 sec

Table 1. Means of each class' baseline and treatment recess transition times

Figure one illustrates the results for all three participating classes. During baseline, the data from Class 1 had an upward trend representing increasing time to line up after the signal at recess. Baseline data were collected over five sessions. Overall, Class1's treatment phase data are inconclusive as to the effect of the TTG. Following an immediate and substantial level change, there was a week straight of rain causing the students to be unable to play the game because they could not go out to the playground. As a result, the class's time to line up increased and became variable possibly trending upward. The class took five sessions to earn their prize and was then returned to baseline conditions. The return to baseline phase displayed an apparent and consistent level change. This was the only class to have a return to baseline phase. Prior to the treatment phase, it can be concluded that Class 1 would have averaged 5.76 hours per school year spent

lining up after recess. After playing the TTG this time fell to 2.84 hours per year. This made a 49% decrease in time spent lining up after recess.

Baseline data were collected for Class 2 over six sessions. Excluding the third session, during which, the teachers on recess duty loudly announced to the class they were being timed, the baseline data had a stable trend. Class 2's data display a positive effect had by the TTG on the recess transitions of the students. The data show a stable downward trend. Class 2 required ten sessions to earn enough letters to obtain their prize. During TTG sessions, students in this class were observed stepping out of line to provide behavioral correction to their peers. This is most likely a byproduct of the interdependent group-wide contingency in place. During performance feedback sessions, these students were instructed to ensure their own behavior was appropriate and not interfere with the behavior of others. Prior to the treatment phase, it can be concluded that Class 2 would have averaged 6.1 hours per school year spent lining up after recess. After playing the TTG this time fell to 2.9 hours per year. That is a 47.5% decrease in time spent not on academic instruction.

Baseline data for Class 3 were collected over nine sessions. With the exception of the third session, where the class had a reaction comparable to Class 2, Class 3's baseline data were relatively stable. Data from the first session of the intervention phase show a drop in level. Session twelve followed almost a week of being unable to play on the playground due to muddy conditions. Collectively, however, the data of Class 3 show a steep decline in the amount of time required for the students to line up after recess. Prior to the TGG, Class 3 would have averaged 4.96 hours per year spent lining up. While playing the game, it can be deduced that Class 3 would spend 2.4 hours per year preparing to go inside after recess. This is a 48.4% decrease in time spent lining up after recess. For all classes, interrater reliability was calculated for 35% of the total intervals with 98% reliability.

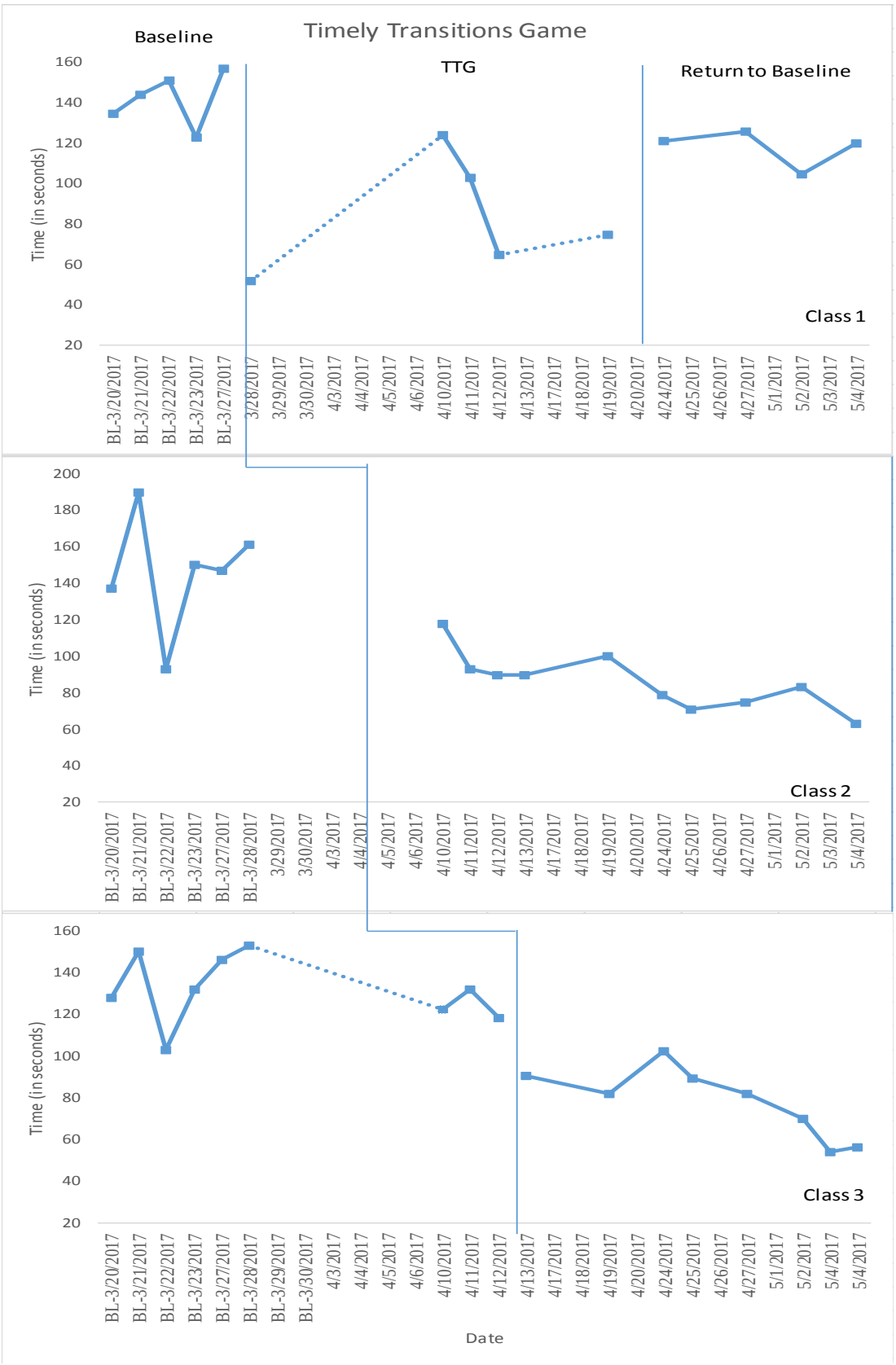
Timely Transitions Game
Baseline
TTG
Return to Baseline
Class 1
Class 2
Class 3
Time (in seconds)
Date

Figure 1. Timely Transitions Game implementation at recess

CHAPTER V

DISCUSSION

Results of the study support previous research demonstrating the utility of the Timely Transitions Game in decreasing the amount of time spent by students and teachers on transitions (Campbell & Skinner, 2004; Yarbrough et al., 2004). Previous research has explored the use of this method with students as young as second grade and as old as sixth grade. It should be noted that the two classes whose data definitively showed a true change in time used for transitions from recess, are second grade classes. When working with the first grade class, it was not clear that the students thoroughly understood the randomized criteria portion of the game. Although it had been explained to them and demonstrated during the teaching phase, the students may not have understood that their goal or time to beat would change from day to day regardless of their actual performance. There may be developmental levels of understanding necessary to play TTG in the way it was designed. If this is the case, possibly, first graders are not at this level of understanding. Modifications, such as a set goal of time to beat rather than randomized criteria or additional practice and feedback of expected behaviors, may be needed to be successful with this intervention. Future research could address this by defining a time under which the students must line up. This would provide a clear expectation of behavior for the students to meet. They could also explore the TTG in use with other grades or settings like private schools or alternative schools.

To gauge teacher acceptability of this study, the teachers involved were asked not only how they felt about it, but if they saw a positive impact on the behavior of their students after coming into the classroom from recess. The teacher of Class 2 reported that she could still see the effects of the TTG even after her students had earned their reinforcement. She said her class loved playing. Class 1's teacher reported that although she liked the game overall, she did not enjoy the randomized criteria for reinforcement. She reported that her first grade students were unable to understand why the criteria changed every day. The teacher of Class 3 stated that she enjoyed the TTG and she felt it made her students be more accountable for their own behavior and how it affected the other students in their class. All of the teachers said they felt their students returned to the classroom after recess more calm and ready to learn than they had prior to implementation of the TTG.

Treatment integrity was at 100% for each of the classes. This indicates the teachers followed the intervention protocol with perfect levels of accuracy. Therefore each class received the TTG with all components as specified. It can be inferred with relatively high levels of confidence that the changes in transition times were due to the implementation of the TTG.

One limitation of this study was the weather. A key component of the study was that the students be able to go outside for the researcher to time how long it took the students to line up following recess. The students missed 11 days on the playground due to severe weather during the course of the study. When the students were not playing on the playground they were not given opportunities to practice correct lining up behaviors leading to decreased opportunities to respond and earn feedback and reinforcement.

Additionally, in the classroom there are often opportunities to initiate many salient cues in the form of a transition warning be it a song to indicate that a transition is going to take place or the teachers saying, "We are going to wrap up this activity in 5 minutes" followed by the

directive to begin the next activity. At recess, due to the nature of the lack of containment possible in a classroom, it is nearly impossible to provide a cue that there will be a transition taking place to all students prior to that actual transition. Because of this, the only cue that the next activity will be taking place is the blow of a whistle by the teachers on recess duty. Students then need to end their games, collect equipment, and rush to line up all in the same span of time.

Future Directions

There are numerous questions that could be addressed by future research involving the Timely Transitions Game. As discussed before, a possible future study could examine if using a mystery motivator and a predetermined criteria for success is more successful than using randomized criteria at decreasing the amount of time used for transitions. Generally speaking, it should be easier to reach a goal when you are aware of the parameters within which you must stay.

Another possible study could examine the impact of the TTG on a class' time to task. Researchers could not only determine if the TTG minimizes time used on transitions but if students begin post-transition activities more quickly after playing the TTG. Findings from this could open up new methods of classroom management possibly increasing the amount of instructional time in a school day without manipulating the schedule.

Furthermore, researchers could look at the impact the TTG has on individual student behavior. The game was intended for groups of students to be used in an interdependent group-wide contingency but if there are a few students who misbehave during transition time, it would be interesting to assess the outcomes when a dependent group-wide contingency is in place with reinforcement for the whole class hinging on the behavior of a few students.

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APPENDICES

APPENDIX A

Script for Recruiting Principals and Teachers

Proposal Title: Examination of the Timely Transitions Game for Use in First and Second Grades

"I would like to request your permission to collect data for my dissertation at your school and in your classroom(s). I appreciate you spending this time with me and would like to briefly discuss the purpose and methods of the proposed study with you."

The purpose and the research problem in the proposed study:

Research has suggested that students spend a small percentage of their days actively engaged in academic tasks. A key factor that affects the amount of time spent learning is the amount of time spent transitioning between classrooms and subjects. The Timely Transitions Game has previously been found to minimize the amount of time that students spend transitioning from classroom to classroom in older students. This is a study that intends to replicate the findings and minimize the amount of time that students spend transitioning from one room to the next.

Methodology:

The participants in the current study will include 1st and 2nd grade students and their teachers. Participating teachers will be given the opportunity to nominate their classrooms for participation in this study. After parental permission is secured, researchers will observe the transition time that your class has the most difficulty will to gain a measure of the length in minutes of how long the transition period is.

A teacher training for the study's timing, recording, and feedback procedures will be conducted in one session lasting approximately 30 minutes. Transition observations will be done daily during the class' most difficult transition time. The transition time and performance feedback will be done following the transition period. The study will last approximately 6 to 8 weeks. My research team and I will prepare and provide all materials to be used during the study.

"Do you give permission for me and my team of one to two other graduate students to collect the data described at your school and in your classroom(s)? Thank you again for your time."

APPENDIX B

Informed Consent: Principal/Teacher
Oklahoma State University

Project Title: **Examination of the Timely Transitions Game for Use in First and Second Grades**

Investigators: Arianna Johnson, MS, Graduate Student, Oklahoma State University
Terry Stinnett, Professor and Director of School Psychology Center, Oklahoma State University

Purpose:
Research has suggested that students spend a small percentage of their days actively engaged in academic tasks. A key factor that affects the amount of time spent learning is the amount of time spent transitioning between classrooms and subjects. The Timely Transitions Game has previously been found to minimize the amount of time that students spend transitioning from classroom to classroom in older students. This is a study that intends to replicate the findings and minimize the amount of time that students spend transitioning from one room to the next.

Project Procedures:
This study will examine the transition times of two second-grade classrooms and two first grade classrooms at a public elementary school in northeastern Oklahoma. Approximately half of the students enrolled at this school are Native American.

Procedures

This study will use a Small N concurrent multiple baseline design. This design will allow for experimental control across multiple classes while also controlling for many threats to validity such as history, selection, and temporal precedence (Winn, Skinner, Allin, & Hawkins, 2004). Four classes will go through an intervention phase where an immediate change in level is expected. Each class that exhibits shortened transition times will add to the power of experimental control.

Baseline. Baseline data on all four classes' transition times will be collected at the beginning. Prior to implementing the TTG, transition data points will be collected until there is stability in the data points. The researcher will consult with the teachers of each class to identify their slowest, most difficult transition. This is the transition that will be targeted. The first class whose data levels out or begins to increase will be chosen for intervention first.

Teaching and intervention. Prior to the intervention phase, the researcher will teach the students about the components of the intervention. The students will be taught the appropriate way to transition from one area of the school building to the next and given chances to practice until they do so without requiring correction. The expectations will be based on the school wide expectations for hallway behavior set forth by the school's SW-PBIS team. Students will be taught the expectations through modeling and role playing with the researcher, teacher, and each other. The researcher and teacher will also demonstrate non examples of the behaviors so the students will have an understanding of what will not be acceptable. They will then be given opportunities to demonstrate the expected behavior and will either be reinforced for correct behavior or corrected for misbehavior.

The researcher will then explain the explicit timing element of the intervention. The teacher will explain how the transition times for the day will be recorded on the designated poster board. The researcher and teacher will then demonstrate the process of drawing the transition time criteria and the name of the transition (i.e. homeroom to music room) and marking if the class met the randomly drawn criteria on the poster board. The teacher and researcher will work together prior to this stage to name each transition to take place throughout the day to ensure that there is a consistent understanding. Finally, the teacher will explain to the students that each time they meet the random criteria at the randomly drawn transition period, they will earn a letter toward their prize (ex. C-O-O-K-I-E toward homemade cookies).

Selection of reinforcers will be a multiple-step process. First, the children in each class will compile a list. Next, the teacher will go through the list and approve whichever prize options are appropriate and feasible. Finally, the teacher will randomly draw the reinforcer from the menu created by the class. The class will earn a letter each time they meet the randomly chosen criteria. The letters earned will spell out the reinforcement they chose. For example, if the chosen prize was a movie day, the class would need to earn the letters M-O-V-I-E.

After the learning has taken place they will begin playing the game and the teacher will track their data. I will begin teaching the next class the procedures and start the process with them when their data shows a stable trend. The number of letters in each class' prize will be held at a constant to ensure that they are required to meet the criteria the same number of times. This will continue until all classes have been through the intervention phase and earned their chosen reinforcement at least once.

Risks of Participation:

If one student consistently behaves in a way that prohibits the class from meeting their goal time, he or she, may be excused from the study to prevent feelings of animosity from the other students. Other than this, there are no risks posed.

Benefits:

Students may spend less time in the hallway and more time in the learning environment allowing for increased access to instruction. They may also have quieter, faster, and more organized transitions which minimize distractions to other students in the school.

Confidentiality:

Every effort will be made to maintain the confidentiality of the data obtained from this study. The data will be housed at Oklahoma State University and only the Principal Investigator and the research assistants working on the project will have access to it. Electronic data will be stored on a password-protected computer with password access only available to the researchers working on this project. Any written results will discuss general trends across all students and will not include information that will identify you or your students. Your level of participation will not be shared with other faculty, staff, or administration.

Compensation:

No monetary compensation is offered for participation in the study. The benefits provided by the study are explained above.

Contacts:

If you have any questions with regard to you or your students' involvement in this study please contact us at your earliest convenience:

Arianna Johnson	Terry Stinnett, Ph.D.
Graduate Student	Professor and Director of School Psychology Center
Oklahoma State University	Oklahoma State University
(816)309-3480	(405) 744-9456

If you have questions about your rights as a research volunteer, you may contact Dr. Hugh Crethar, IRB Chair, 223 Scott Hall, Stillwater, OK 74078, (405) 744-3377, or irb@okstate.edu.

Participant Rights:
Participation in this study is voluntary and you may choose to withdraw from the assessment at any time. No risks from withdrawal or termination are anticipated.

Signature:
I give my permission for faculty and/or students from Oklahoma State University to assess in my school/classroom for the purposes of this research. I have read and fully understand the consent form. I sign it freely and voluntarily. A copy of this form has been given to me.

_____	_____	_____
Signature of Principal	School Site	Date
_____		_____
Signature of Teacher		Date

I certify that I have personally explained this document before requesting that the principal/teacher(s) sign it.

_____	_____
Signature of Researcher	Date

APPENDIX C

Parent/Guardian Permission (Consent) Form
Oklahoma State University

Student Name: _____

Dear Parent(s),

This is a letter requesting parent permission (consent) to include your child in a brief research project within his/her classroom. Your child has been chosen to participate in this research study due to their enrollment in the first or second grade which is the population of interest in this study. Please have your child return this form signed (last page) if you give permission for your student to participate.

Project Title: **Examination of the Timely Transitions Game for Use in First and Second Grades**

Researchers: Arianna Johnson, M.S., Graduate Student
Oklahoma State University

Terry Stinnett, Ph.D., Professor and Director of School Psychology Center
Oklahoma State University

Purpose:
This study aims to shorten the time spent on lengthy transitions for classrooms of students throughout the building.

Project Procedures:
Students who return a parent permission slip allowing participation will be taught the behavior expectations for travel through the hallways. They will then be timed and given points towards a reward for meeting or being faster than their goal transition time. When students do not adhere to the expectations, they will be given the opportunity to practice the expected behaviors.

Risks of Participation:
This project will not affect the activities of the general classroom or your child's grades. This project involves minimal risk, as the evaluations and interventions used will be similar to ones used in the everyday classroom.

Benefits:
The current project will add to what we know about classroom management interventions and how best to decrease the amount of time spent outside the learning environment. Your student will have the added benefit of possible increased access to instruction as a byproduct of being in the classroom longer.

Confidentiality:
Every effort will be made to keep the scores on assignments, behavioral observation data, and names of participating students confidential and private. All data will be kept as a class average. All research project records will be kept in a secure location at Oklahoma State University and only the research project assistants will have access. Any results that are published in articles or delivered in presentations will discuss group trends and will not include any information that will

identify you, your child, your child's school, or your child's school district. Your child's participation in this project will not affect his or her daily classroom activity or grades. All records will be destroyed after six years.

Compensation:
No monetary compensation is offered for participation in this research project. The benefits provided by the study are explained above.

Contacts:
If you have any questions with regard to you or your students' involvement in this study please contact us at your earliest convenience:

Arianna Johnson, M.S.
Graduate Student
Oklahoma State University
816-309-3480

Terry Stinnett, Ph.D.
Professor and Director of School Psychology Center
Oklahoma State University
(405) 744-9456

If you have questions about your rights as a research volunteer, you may contact Dr. Hugh Crethar, IRB Chair, 223 Scott Hall, Stillwater, OK 74078, (405) 744-3377, or irb@okstate.edu.

Participant Rights:
Participation in this study is voluntary and you may choose to withdraw from the assessment at any time. No risks from withdrawal or termination are anticipated.

Parental Signature for Minor:
I give my permission for faculty and/or students from Oklahoma State University to assess my child/student, for the purposes of this research. I have read and fully understand the consent form. I sign it freely and voluntarily. A copy of this form has been given to me. As parent or guardian I authorize _____ (print student's name) to participate in the described research.

Notification of allergies:
Does your student have any food allergies that the researcher should be made aware of in the case that your student's class votes on an edible prize? If so, what is the allergy?
_____

_____ _____
Parent/Guardian Name (printed) Date

_____ _____
Signature of Parent/Guardian Date
I certify that I have explained this document before requesting that the participant's parent/guardian sign it.

_____ _____
Signature of Researcher Date

APPENDIX D

Child Assent Form
Oklahoma State University

We are doing a study to learn about how to have kids spend less time in the hallways between subjects. We are asking you to participate because you have been learning how to behave in the hallway.

If you agree to be in our study, we are going to practice hallway expectations and time you when you are going from one classroom to the next. For example, we might time you when you leave your classroom and go to PE.

You can ask questions about this study at any time. If you decide at any time not to finish, you can ask us to stop.

You may earn a prize as a class if you follow the hallway expectations and transition quicker and better than when you started.

If you sign this paper, it means that you have read this and that you want to be in the study. If you don't want to be in the study, don't sign this paper. Being in the study is up to you, and no one will be upset if you don't sign this paper or if you change your mind later.

Your signature: _____ Date _____

Your printed name: _____ Date _____

Signature of person obtaining consent: _____ Date _____

Printed name of person obtaining consent: _____ Date _____

APPENDIX E

Treatment Fidelity Form

Examination of the Timely Transitions Game for Use in First and Second Grades

Teacher Name: _____

Research Assistant: _____ Date: _____

Observe study session and indicate the presence or absence of each element.

1. Students are signaled to line up to transition.	☐Yes	☐No
2. Teacher begins timer after giving the directions, "It's time to line up".	☐Yes	☐No
3. Teacher stops timer if behavior correction is needed then resumes timing.	☐Yes	☐No
4. Teacher gives the students feedback on the time of their transition.	☐Yes	☐No
5. Teacher records the time of the transition on poster.	☐Yes	☐No
6. Teacher picks target transition time from jar and records if it was beaten.	☐Yes	☐No

Calculate integrity: # of Yes _____/6 x 100 = ____ % procedural integrity

Feedback / recommendations for teacher, including need for additional training:
Note: Feedback / recommendations *must* be provided for any "no" answer on the checklist.

Feedback was provided to teacher: ☐verbally ☐in writing ☐both

Signature of reviewer: _____

APPENDIX F

Inter-rater Reliability Form
(Point-by-Point Agreement)

Examination of the Timely Transitions Game for Use in First and Second Grades

Teacher Name: _____

Calculate point-by-point agreement by dividing the agreement intervals by the total number of agreement and disagreement intervals, then multiply by 100.

Observation Date	Agreement Intervals	Disagreement Intervals	Point-by-Point Agreement

APPENDIX G

Confidentiality Agreement for Research Team Members

Examination of the Timely Transitions Game for Use in First and Second Grades

I, _____ have been instructed that all identifying information regarding student names, classroom teachers, schools, etc. that I have access to as a research team member for this research project is confidential. I agree not to share any identifying information with anyone who is not a member of the research team, and agree to protect the confidentiality and identity of all participants involved in this proposed study.

I have read and fully understand the confidentiality agreement. I sign it freely and voluntarily. A copy of this form has been given to me.

_____ _____

Research Team Member (printed) Date

_____ _____

Signature of Research Member Date

I certify that I have explained this document before requesting that the research team member sign it.

_____ _____

Signature of Researcher Date

APPENDIX H

Intervention Protocol

Prior to instructing the students to line up, remind them that they are working toward a prize and can only earn that prize if they follow the hallway procedures and their transition time is less than the one you draw from the bucket.

1. Remind them of the hallway procedures laid out in the schoolwide expectations.
2. Cue the students to line up by saying, ***"It's time to line up."*** Begin timing with the stopwatch.
3. Stop the timer if the students display behavior contrary to the classroom expectations. Stop the line and explain what the students were doing incorrectly and what they should be doing. After the correction has been issued, begin the timer again.
4. Stop the timer for the transition period after the students are all seated at their destination, quietly waiting for instructions on the next task.
5. When the class returns to the homeroom, tell the students how long their transition lasted.
6. Draw a random time criteria from the jar.
7. Ask the students if it is longer or shorter and mark the time slot with a check mark if the transition time was shorter than the drawn criteria. Give the students verbal praise regarding their transition behavior and write the letter they earned that corresponds with the class reward on the poster.
8. If they did not meet the criteria, explain that they will have a chance to try again.

APPENDIX I

Institutional Review Board Approval

Oklahoma State University Institutional Review Board

Date:	Friday, November 11, 2016
IRB Application No	ED16139
Proposal Title:	The effects of the timely transitions game on room-to-room transitions of elementary school students.
Reviewed and Processed as:	Expedited

Status Recommended by Reviewer(s): Approved Protocol Expires: 11/10/2017

Principal Investigator(s):

Arianna Johnson
Stillwater, OK 74078

Terry Stinnett
445 Willard
Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1.Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval. Protocol modifications requiring approval may include changes to the title, PI advisor, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms
2.Submit a request for continuation if the study extends beyond the approval period. This continuation must receive IRB review and approval before the research can continue.
3.Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of the research; and
4.Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Dawnett Watkins 219 Scott Hall (phone: 405-744-5700, dawnett.watkins@okstate.edu).

Sincerely,

Hugh Crethar, Chair
Institutional Review Board

VITA

Arianna Elizabeth Johnson

Candidate for the Degree of

Doctor of Philosophy

Dissertation: THE EFFECTS OF THE TIMELY TRANSISTIONS GAME ON TRANSITIONS IN PRIMARY GRADES

Major Field: Educational Psychology option School Psychology
Specialty: Crisis Prevention and Intervention

Biographical:

Education: 2009-2013 Bachelor of Science, Major in Psychology and Gerontology, Missouri State University

2013-2014 Master of Science in Educational Psychology, Oklahoma State University

Completed the requirements for the Doctor of Philosophy in Educational Psychology at Oklahoma State University, Stillwater, Oklahoma in May, 2018.

Experience:

Professional Memberships:

National Association of School Psychology (NASP)	2013-Present
American Psychological Association	2013-Present
School Psychology Graduate Organization	2013-2017
Psi Chi Psychology Honors Society	2012-Present